Quality Control

92069

Page 1

October-22-12 3:17:47 PM Item ID: 647.1613 Accept *N900040100* Setup Start Revision ID: Item Name: Doubler Start Otv: 6.00 Start Date: 22/10/2012 Cust Item ID: **Required Date:** 05/11/2012 Rea'd Otv: 6.00 **Customer:** Reference: Run Process Plan: ML 5 Date: 12-10-22Tooling: Approvals: Date: Stop Date: SPC (Y/N): Date: Operation Sequence ID/ Set Up/ Tool ID Tool # Plan Reject Accept Reject Work Center ID Description **Run Hours** Code Otv Otv Number Stamp Draw Nbr **Revision Nbr** 647,1600 N/C 110 0.00 *110* Wateriet 0.00 Memo 1-Cut as per Dwg Dwg Rev: W/C FLOW CNC Wateriet 2094 -050 Prog Rev: 1)/ 2-Deburr if necessary 120 QC2- Inspect parts off machine FAI/FAIB 0.00 *120* OC

0.00

Memo

										DQA:	Date:	
NCR: Y	es / No				WORK ORDER NON-C	100	VFOR	MANCE / UPI	DATE			Se Se
								•		QA Closed:	Date:	
Work Orde	ar.				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	lo				Rework Scrap Use-as-is Work Order Update		1	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	ł	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	ı	nitial	Act	ion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												
Other [
Process					•							
Supplier											ļ	
Training			}									
Unapproved	_							L.,				
					F/	AUL	T CATE	GORY				
Landin	ng Gear				General		_			_		
1	Bending				Bend		Grain			Ovalized		Pressure/Forced
	Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
	Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/l	Jnclear	Part Lost/Mi	issing	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved	_	-
	Heat Trea	t			Countersink		Mislabe	led		Positioned V	Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

150

Quality Control

Memo

QC

October-22-12 3:17:47 PM Item ID: 647.1613 Accept *N900040100* Setup Start **Revision ID:** Item Name: Doubler Start Qty: 6.00 **Start Date:** 22/10/2012 **Cust Item ID:** Req'd Qty: 6.00 **Required Date:** 05/11/2012 **Customer:** Reference: Run Process Plan: _____ Date: ____ Tooling: Approvals: Stop QC: _____ Date: ____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Reject Reject Tool ID Tool # Plan Accept Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp 130 QC8- Inspect parts - second check 0.00 *130* QC 0.00 Memo Quality Control 15/11/01 Sp 12/11/13 140 Bend as per dwg 0.00 *140* Brake NC 0.00 Memo Brake NC C'SINK HOLES AS PER DWG 150 QC5- Inspect part completeness to step on W/O

										DQA:	Date:	
NCR: Y	Yes / No	1			WORK ORDER NON-	COI	NFORM	MANCE / UF	PDATE	•		\.
										QA Closed:	Date:	
Work Orde	∍r·				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
					Rework	7		Skid-tube	Crosstube		Water Jet	Engineering
Part N	No.				Scrap	1 1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	-				Use-as-is]	Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	No				Work Order Update			Large Fab	Composite		Supplier	
			1			لب					r	
Root		.			ption of work order update	1	nitial	i e	ction	Sign &		001
Cause	Date	Step	Qty	•	or Non-conformance	Ch	ief Eng	Des	cription	Date	Verification	QC Inspector
Doc/Data	H	1										
Equip/Tooling	Н											
Operator	\vdash											
Material					•							
Setup	H											
Other							4 9					
Process	H						,					
Supplier												
Training				i								
Unapproved			<u> </u>									
						AUL	T CATE	GORY				
Landi	ng Gear				General		1			i		1
l l	Bendin	g			Bend	1	Grain		1	Ovalized		Pressure/Forced

Hardware

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Inspection Incomplete

Instructions Incomplete/Unclear

Temperature/Cure

Wrong Stock Pulled

Weld

Other

Over/Under tolerance

Part Incorrect

Part Moved

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

BOM/Route

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Burrs

Broken/Damaged

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cracks

Cuffs

Heat Treat

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Centre Not Concentric to O/S

120

Quality Control

Memo

October-22-12 3:17:47 PM Item ID: 647.1613 Accept *N900040100* Setup Start **Revision ID:** Item Name: Doubler **Start Date:** 22/10/2012 Start Qty: 6.00 **Cust Item ID: Required Date:** 05/11/2012 Req'd Qty: 6.00 **Customer:** Reference: Run Process Plan: ____ Date: Approvals: Tooling: Date: Stop QC: _____ Date: ____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Reject Insp. Accept Work Center ID Description **Run Hours** Qty Qty Code Number Stamp 160 Outsource process-Anodize per QSI017 4.1.10.1 0.00 CL 12/11/14 6 *160* Outsource4 0.00 Memo Outsource process - Anodize HARD ANODIZE, COLOR BLACK AS PER DWG.(SEE NOTE 3) 170 Receive & Inspect for Damage & Mat'l Certs 0.00 *170* Packaging 0.00 Memo Packaging 180 QC5- Inspect part completeness to step on W/O

												DQA:	Date	2:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORM	ANCE / UP	DATE		•			
											•	QA Closed:	Date	2:	
Work Orde	or.					DISPOSITION				AGAIN	IST DEI	PARTMENT	/PROCESS		
Part f	- ِ .ov					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstu Small F Finish Compos	ab		Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root					Descri	ption of work order update		Initial	Ac	tion		Sign &			
Cause		Date	Step	Qty	. (or Non-conformance	Ch	nief Eng	Desc	ription		Date	Verification	\perp	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved						·									
				·			AUL	T CATE	GORY						
Landi		Bending Centre No Cracks Crushed/I Cuffs Heat Trea Inspection	Crimped. It n Strip in		o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misreac	on Incomplete ions Incomplete/ nance led	Unclear	-	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct issing Vrong	v v	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	Lİ	Ripples in	Reug		[Drill Holes	1	Offset							·

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

October-22-12 3:17:47 PM

92069

Page 4

Item ID: 647.1613 Accept *N900040100* Setup Start **Revision ID:** Item Name: Doubler Start Qty: 6.00 **Start Date:** 22/10/2012 **Cust Item ID: Required Date: 05/11/2012** Req'd Qty: 6.00 **Customer:** Reference: Run Process Plan: _____ Date: ____ Approvals: Tooling: Date: QC: Date: _____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Reject Tool ID Tool # Plan Accept Reject Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp 190 0.00 *100* SprayPaint 0.00 Memo PRIME IAW MIL-P-23377J TYPE1 CLASS N AS PER DWG. (SEE NOTE 3) **Spray Painting** CARDINAL 4860-50 PRIMER BATCH: \23 693 200 QC14- Inspect Spray Paint 0.00 QC 0.00 Memo Quality Control Identify as per dwg & Stock Location: A 210 *210* Packaging 0.00 Packaging ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***

										DQA:	Date	:
NCR:	Yes / N	o			WORK ORDER NON-C	COI	VFOR	MANCE / UPI	DATE			-
										QA Closed:	Date	
Work Ord	er:				DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part I	No				Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	l	nitial	Act	ion	Sign &		
Cause	Dat	e Step	Qty		or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material								:				
Setup												
Other	•											
Process												
Supplier												
Training												1
Unapproved												
	• ,				F	AUL	T CATE	GORY				
Landi	ng Gear				General					=		
	Bendir	ng			Bend	L	Grain			Ovalized		Pressure/Forced
	Centre	Not Conce	ntric to	o/s	BOM/Route	L	Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	ct	Weld
	Crush	ed/Crimped	-		Burrs		Instruct	ions Incomplete/l	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved	_	_
	Heat 1	reat			Countersink		Mislabe	led		Positioned V	Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

October-22-12 3:17:47 PM Item ID: 647.1613 Accept *N900040100* Setup Start **Revision ID:** Item Name: Doubler **Start Date:** Start Qty: 6.00 22/10/2012 **Cust Item ID: Required Date:** 05/11/2012 Req'd Qty: 6.00 **Customer:** Reference: Run Approvals: **Process Plan:** Tooling: Date: Date:_____ Date: ______ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. **Work Center ID Description** Code Number Stamp **Run Hours** Qty Qty 220 QC21- Final Inspection - Work Order Release 0.00 0.00 Memo Quality Control

NCR: Y	es / No				WORK ORDER NON-	COI	NFORM	MANCE / UPDA	TE				
										QA Closed:	Da	te:	
Work Orde	er:				DISPOSITION	_			AGAINST DE	PARTMENT			
Part N					Rework Scrap Use-as-is Work Order Update		Therm	Machining s	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. e/Packaging Supplier		Engineering Quality Other
Root				Descri	ption of work order update		Initial	Action		Sign &			11.00
Cause	Date	Step	Qty		or Non-conformance	Cł	nief Eng	Descripti	ion	Date	Verificatio	n	QC Inspector
Doc/Data													
Equip/Tooling									!			1	
Operator		İ	İ									-	
Material		1											
Setup													
Other												İ	
Process				•									
Supplier			,										
Training									•				
Unapproved													
					F	AUI	LT CATE	GORY					
Landir	ng Gear			_	General		=						
	Bending				Bend		Grain			Ovalized		F	ressure/Forced
1	Centre No	ot Concer	ntric to (o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	ד∐	emperature/Cure
	Cracks			L	Broken/Damaged		Inspecti	on Incomplete		Part Incorred	:t		Veld
ļ	Crushed/	Crimped.		L	Burrs	L	Instruct	ions Incomplete/Uncl	ear	Part Lost/Mi	ssing	∖∐	Vrong Stock Pulled
	Cuffs			L	Contamination		Mainte	nance		Part Moved			
	Heat Trea	it			Countersink		Mislabe	led		Positioned V	/rong		
	Inspection	n Strip in	Tube		Cut Too Short		Misread	i		Power Loss/	Surge		Other
[Ripples in	Bend			Drill Holes		Offset						
	Torque W	aves in E	xtrusio	ı [Drawing		Out of C	Calibration					

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

October-22-12 3:17:51 PM

Work Order ID: 92069

92069

Parent Item:

647.1613

647 1613

Parent Item Name: Doubler

Start Date: 22/10/2012

Required Date: 05/11/2012

Start Qty: 6.00

Required Qty: 6.00

Comments:

IPP REV:A 12.10.04 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	
M2024T3S.050		Purchased	No			110	sf	178.0484	0.0487	0.307579			·	
M2024T3 2024-T3 .050 sheet	S 050								**	0,4			Jm 12-11.	-1

Location Loc Qty Loc Code MAT022 178.0484204 117684 17.8 121216 45.6484204 121889 121889 114.6

Page 1

										DQA	: Date	:
NCR:	Yes / No)			WORK ORDER NON-C	100	VFORM	MANCE / UP	DATE		_	•
					<u> </u>					QA Closed	: Date	2:
Work Orde	er.				DISPOSITION				AGAINST DE	PARTMENT	r/PROCESS	
	···				Rework	1		Skid-tube	Crosstube	1	Water Jet	Engineering
Part N	No.				Scrap		i	Machining	Small Fab	Pro	od. Eng. Coor.	Quality
					Use-as-is	1	1	noforming	Finishing	4	ore/Packaging	Other
NCR N	No				Work Order Update			Large Fab	Composite		Supplier	
· · · · · · · · · · · · · · · · · · ·							<u> </u>			T		
Root				L	ption of work order update	ļ	Initial		tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data												1
Equip/Tooling												
Operator												
Material							:					
Setup												
Other												
Process												
Supplier												
Training			}									
Unapproved												
		» » »			F	AUL	T CATE	GORY				
Landi	ng Gear				General		_					
	Bendin	g			Bend		Grain			Ovalized		Pressure/Forced
	Centre	Not Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Unde	r tolerance	Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	ion Incomplete		Part Incorre	ect	Weld
	Crushe	d/Crimped			Burrs		Instruct	ions Incomplete/	Unclear	Part Lost/N	1issing	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved		
	Heat Ti	eat			Countersink		Mislabe	led		Positioned	Wrong	
	Inspect	ion Strin ir	Tube		Cut Too Short		Misread	1		Powerloss	/Surge [Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

DART AEROSPACE LTD	Work Order:	97069
Description: 647. Vouble	Part Number:	647 1613
	·	
Inspection Dwg: 647 1600 Rev: 10/c	·	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø 0, 180"	+ 0.005"	0,181"	<u> </u>		V	Produsor
\$ 0,104"	1 0.004"-piooi"	0.107	-		V	
Ø 0, 196°	10005 -0.00.	0.199"	_		<i>V</i> .	
1,24"	H-0.010	1,235	-		V	
0,40	HL 0.010"	0.395"	_		V	·
2.83"	11-0.000	7.827"			V	
0,298	11-0,005	0.2932	_		V	
0.344"	11-0,005"	0,342"			V	
0.685	11-0.005"	0.684"	· -	e .	* V	
1,071"	t1-0.005"	1.068"			V	•
0,400"	11-0,005	0,399"	_		V	
2.48	11 0.010"	2.482"			V	
0.050"	11-0005	0.050	_		V	
·						
			ΩA.			iv.

·			V O A			
Measured by:	Fm	Audited by:	215 /	Prelim	inary Approvai:	
Date:	12-11-1	Date:	1211.01		Date:	

Rev	Date	Change		 Revised by Approved	
E	10.04.14	Added preliminary approva	al	KJ	

NOTES:

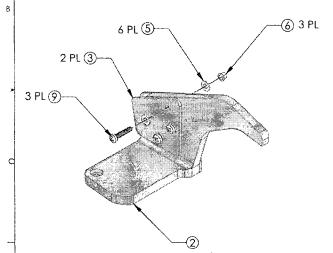
A MATERIAL: ALUMINUM 7075-T651 AMS-QQ-A-250/12

MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4

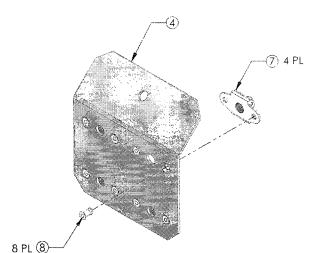
FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III. CLASS 2. COLOR BLACK: CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P 23377 J TYPE I CLASS N

4. DEBURR AND BREAK ALL SHARP EDGES

5. IDENTIFY IAW MPP-120



647.1601 SHOWN EXPLODED

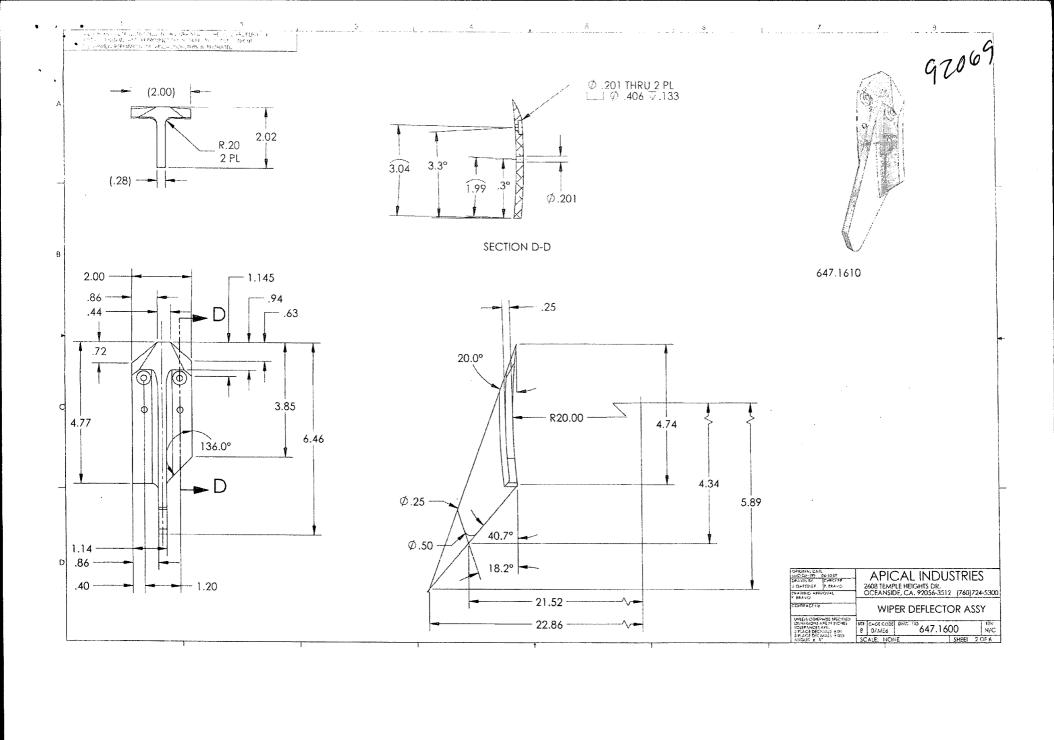


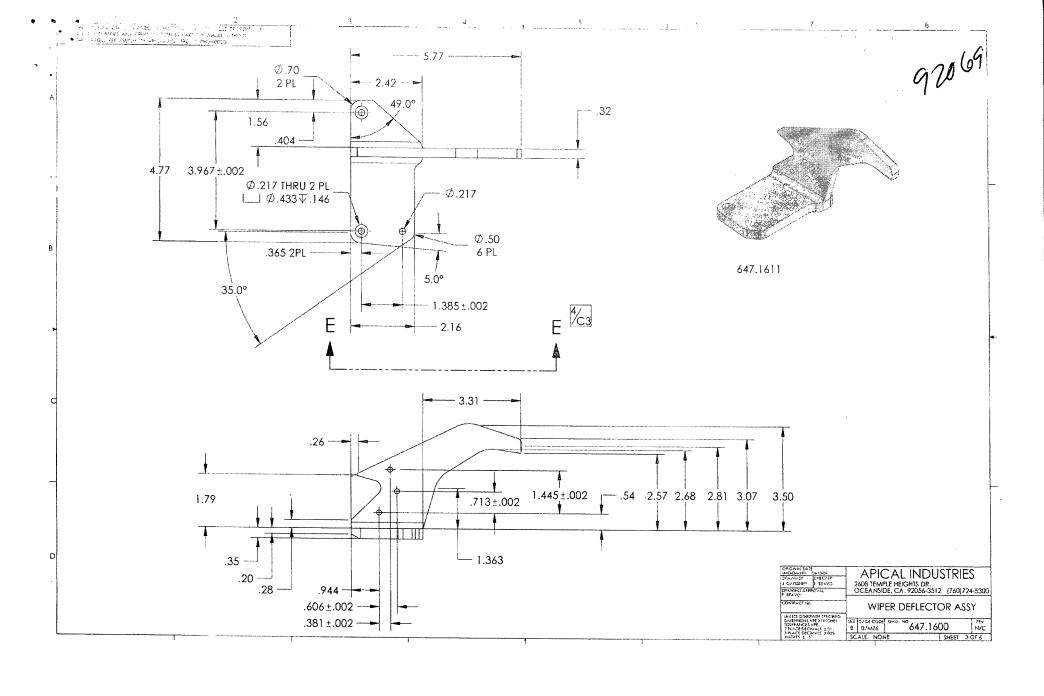
647.1602 SHOWN EXPLODED

SHOP CONTROL RETURN ID.

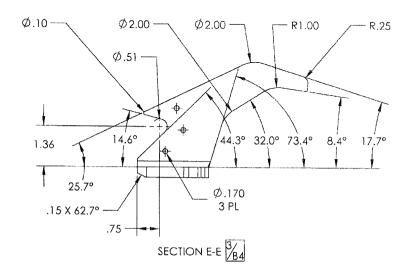
ENGINED ING
UNCONTROLL ID CONT
SUBJECT TO AND DIMES
WITHOUT SOLICE
WORK ORDER
NO. 92069 MCJ

	3	9	601.298	9 SCREW	,	r#\$27039-0812	
8		8	601,298	O NUTPLA	TE RIVET	CCR26455-3-04	
4		7	601,190	0 NUTPLA	TE	1/521059-0	
	3	6	601.297	3 LOCKN	uī	M\$21040408	
	6	5	601.276	4 WASHE	R	MAS) 149FN832P	
1		4	647.161	3 DOUBL	ER	Z2.	4
	2	3	647.161	2 SPLICE	PLATE	4	Z 3\
	1	2	647.161	1 WIPER	DEFLECTOR, AFT	A	. <u>7</u> 3
		1	647.161	0 WIPER	DEFLECTOR, FWD		<u>/3</u>
Х			647.160	2 DOUBL	ER ASSY		
	х		647.160	NI WIPER	DEFLECTOR ASSY, AFT		
 .1602	.1501	FIND #	PART #	!	DESCRIPTION	MATL	SPEC.
 QTY					PARTS LIST		
 NEXT A		1	PROHALONE MODA (B) PAYOLBY GAPDRIER PAWING ALEA BRAVO	CHECKER 09-10-04	APICAL II 2608 TEMPLE HEIGHT OCEANSIDE, CA. 92	S DR.	
 		<u>E</u>	CHEACT NO	(28 ARCSHO	WIPER DEF		······
 			DEVENSIONS A TOLERANCES A 2 PLACE DECE	PE BIBICHES LPE. LAIS + FI	B D7M26 BVO. NO	47.1600	9EV N/C

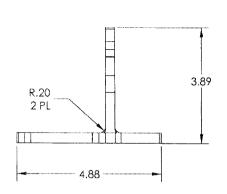




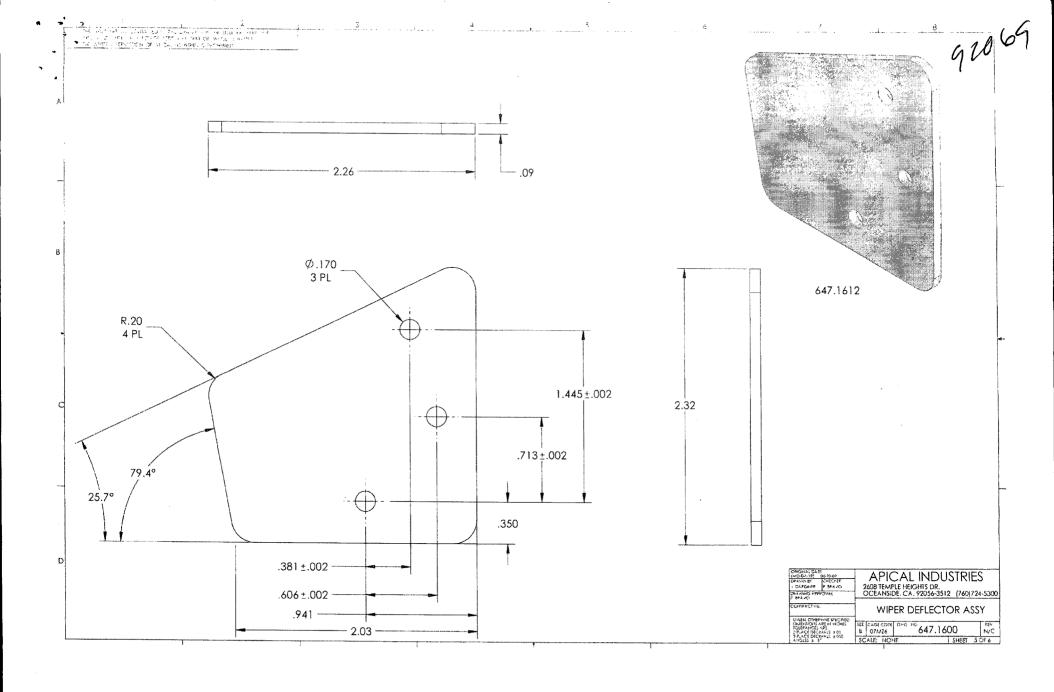


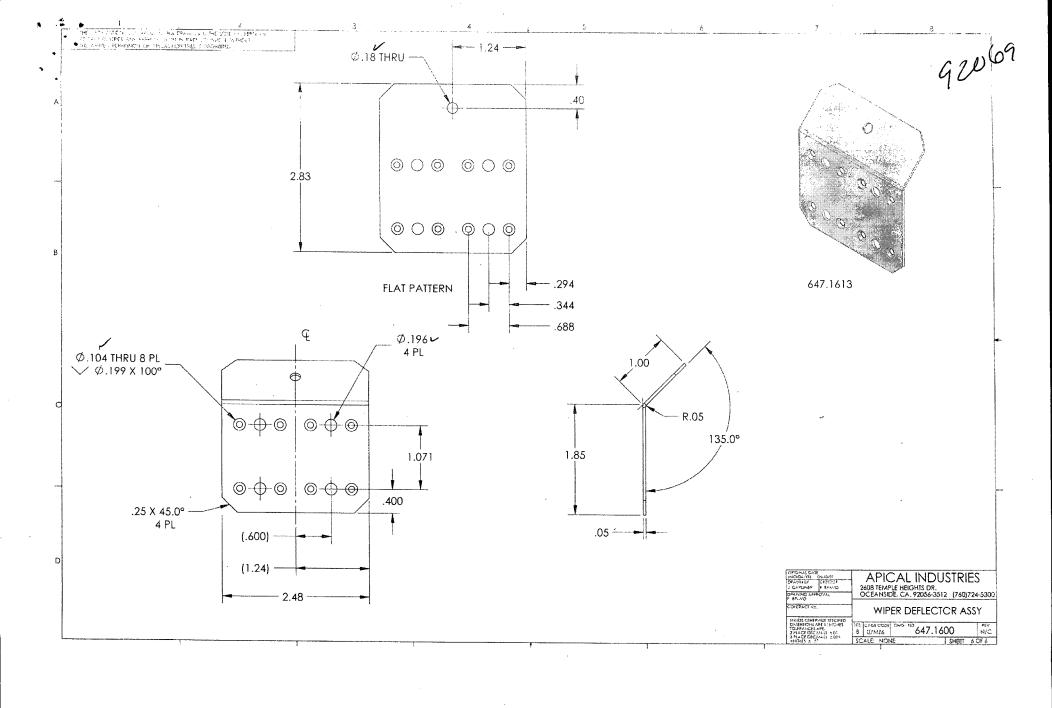


Secretarian Contenta i de la contenta del contenta del contenta de la contenta del la contenta del la contenta de la contenta de la contenta de la contenta de la contenta de la contenta de la contenta de la contenta de la contenta de la contenta de la cont



DRASHALDATE INCODATES DRAWIS OCIDOS DRAWIS EMECER J GARDIER P BRAYO DRAWIG APERDVAL P RRAYO COMPRCISO COMPRCISO COMPRCISO	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
UNCESS OTHERWISE SPECKED CAMPISCHE ARE IN INCHES IGLERANCES ARE 2 FLACE DECEMALS ± 00 3 FLACE DECEMALS ± 1005	WIPER DEFLECTOR ASSY SEZ CACHEDIDES GROW, SEO. 6 07/MZ6 N/C		







A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

Pack List

Number: 62076

Date: 27-Nov-12

To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada

Ship To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

Canada

Eav. 612 632-1185

Ph: 613-632-5200

Fax: 613-632-1185

rms		Ship Via		
Quantity	Description			
	Part: ASST	,	Rev:	
·	HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 Job: 20120737	PO: PO18399	Line:	
	A.T.G. Industries certifies that all item with all requirements, specifications a ISO 9001 : 2008 R ATG SALES-2010 DATE : 1 1 1 1 2 1 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ns in this shipment are in cound drawings referenced in t EGISTERED TERMS APPLY	nformance ne purchase order.	
	RECEIVER SIGNATURE :			